

IN THE CLAIMS

A listing of the claims follow:

1. (Previously presented) A process for producing shaped bodies, in particular cores, molds and feeders in foundry technology, which comprises the following steps:

preparing a composition comprising blending a phenolic resin in solid form, a polyisocyanate, and a refractory material,

at a temperature below the melting point of the phenolic resin;

molding the composition to form a shaped body; and

raising the temperature of the shaped body to above the melting point of the phenolic resin to cure the composition.

2. (Previously presented) The process as claimed in claim 1, wherein the refractory material is mixed with the phenolic resin, to produce a mixture prior to addition of the polyisocyanate.

3. (Previously presented) The process of claim 1, wherein the molding to form a shaped body is carried out in a heated tool.

4. (Previously presented) The process of claim 1, wherein the refractory material is selected from the group consisting of silica sand, olivine, chromite sand, zircon sand, vermiculite, synthetic mold materials such as Cerabeads and microspheres and mixtures thereof.

5. (Previously presented) The process of claim 4, wherein the microspheres comprise hollow microspheres.

6. (Previously presented) The process of claim 1, further comprising adding an exothermic constituent to the composition.

7. (Previously presented) The process of claim 1, wherein the production of the shaped body is carried out without addition of a solvent.

8. (Previously presented) The process of claim 1, wherein the polyisocyanate is dissolved in a solvent in which the phenolic resin is insoluble or sparingly soluble.

9. (Previously presented) The process of claim 1, wherein the polyisocyanate comprises an isocyanate having at least

2, isocyanate groups per molecule.

10. (Previously presented) The process of claim 1, wherein the polyisocyanate is selected from an aliphatic, cycloaliphatic, and an aromatic polyisocyanate and mixtures thereof.

11. (Previously presented) The process of claim 10, wherein the aromatic polyisocyanate comprises diphenylmethane diisocyanate in admixture with its higher homologues.

12. (Previously presented) The process of Claim 1, wherein the phenolic resin comprises a novolak.

13. (Previously presented) The process of claim 1 further comprising curing the shaped body at a temperature of from about 150°C to about 300°C.

14. (Previously presented) The process of claim 13, wherein curing is carried out without addition of a catalyst.

15. (Previously presented) The process of claim 1, further comprising adding a catalyst to the composition.

16. (Previously presented) The process of claim 1 further comprising adding a compound which lowers the melting point of the phenolic resin to the composition.

17. (Previously presented) A shaped body, in particular a core, mold or feeder for foundry technology, prepared by the process of claim 1.

18. (Previously presented) The shaped body of claim 17 which is free of solvents or gaseous catalysts.

19. (Previously presented) A composition for producing shaped bodies, in particular cores, molds and feeders, comprising

a solid phenolic resin,

a polyisocyanate, and

a refractory material.

20. (Previously presented) The composition of claim 19, characterized in that the refractory material comprises hollow microspheres.

21. (Previously presented) The composition of claim 19,

wherein no solvent for either the phenolic resin or the polyisocyanate is present.

22. (Previously presented) The composition of claim 19, wherein the phenolic resin comprises a novolak.

23. (Previously presented) The process of claim 1, wherein the refractory material is coated with the phenolic resin prior to the addition of the polyisocyanate.

24. (Previously presented) The process of claim 4, wherein the hollow microspheres comprise aluminum silicate.

25. (Previously presented) The process of claim 4, wherein the hollow microspheres have an aluminum oxide content greater than about 40% by weight.

26. (Previously presented) The process of claim 4, wherein the hollow microspheres have an aluminum oxide content less than about 40% by weight.

27. (Previously presented) The process of claim 6, wherein the exothermic constituent is selective from an oxidizable metal, an oxidant, fluorine carriers and mixtures thereof.

28. (Previously presented) The process of claim 8 wherein the polyisocyanate solvent is selected from an aromatic solvent, a fatty acid solvent and mixtures thereof.

29. (Previously presented) The process of claim 10, wherein the aromatic polyisocyanate is liquid at room temperature.

30. (Previously presented) The process of claim 11, wherein the higher homologues comprise polymeric MDI having a functionality of from about 2 to about 4.

31. (Previously presented) The process of claim 12, wherein the novolak has a melting point in the range from about 60 to about 120°C.

32. (Currently amended) The ~~process~~ composition of claim 20, wherein the hollow microspheres comprise aluminum silicate.

33. (Currently amended) The ~~process~~ composition of claim 20, wherein the hollow microspheres have an aluminum silicate content greater than about 40% by weight.

34. (Currently amended) The ~~process~~ composition of claim 20, wherein the hollow microspheres have an aluminum silicate content less than about 40% by weight.

35. (Currently amended) The ~~process~~ composition of claim 19, wherein the novolak has a melting point in the range from about 60 to about 120°C.

36. (New) The process of claim 1, wherein said phenolic resin melting point is below about 120°C.

37. (New) The composition as claimed in claim 19, characterised in that said solid phenolic resin has a melting point below about 120°C.